**STUDY REPORT**

**POWER RELATIONSHIPS IN MULTI-STAKEHOLDER PLATFORMS OF AFRICA RISING TO INFORM DESIGN OF OPTIONS FOR R4D, TECHNOLOGY UPTAKE AND ADOPTION**

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**SUMMARY**

This study on power dynamics between different Innovation Platforms (IP) actors was conucted to elucidate processes that influence knowledge, materials and income flow among others in the Kongwa and Kiteto districts were Afriuca Rising has been operating IPs since 2014. The focus on understanding power dynamics was underpinned by the need to gain deeper understanding of the social interaction that influence access and adoption of knowledge and innovations. The seed value chains were used as the key technology around which access to knowledge and technology would be investigated. Results show that culture is key to addressing issues of gender and land ownership and needs to be considered as a key aspect in research and development, however it does not affect access to technologies by communities across the gender divide. The cluster analysis showed that civil society and researchers as key drivers of adoption. The main motivation for most actors is to fight food insecurity, knowledge sharing and increase income. These asiprations are apparent at district form organization point of view but less evident at community level where most initiatives are segmented. There is limited role of private sector in delivery of knowledge and or innovations. Taken together these results show a heavy role of public sector through NGOs, Community Based Organizations and the Local Government, in delivery of technology and knowledge especially of under invested crops. Engaging civil society is critical for dissemination of project messages and technology dissemination. It should however be noted that, public and civil society agencies are usually not-for-profit based, and therefore, have limited direct role in improving farm household incomes. This and the foregoing is critical to inform design of scaling-out initiatives especially in these remote and underinvested ecologies to focus on wider livelihood issues.

**1. BACKGROUND**

Since 2014, the team has managed innovation platforms (IP) in Kongwa and Kiteto. They were set up in line with Africa RISING Research Framework that provides for creation of innovation platforms to identify critical value chains for targeting of research interventions. However, since Africa RISING team already had specific commodities identified through prioritization and own research efforts, the focus of the platforms was to improve functionality of prioritized value chains i.e. (maize, groundnut, pigeonpea, sorghum and pearl millet). These IP were thus established to meet the demand for research relevance i.e. serve as “R4D platforms[[1]](#footnote-1), to engage partners research and co-learning. Within research relevance, we also seek to support pathways for technology uptake and adoption.IP in Kongwa and Kiteto brings together less powerful farmers and more influential actors, such as government officers or traders. In theory, platforms enable the members to articulate their needs and work together to achieve a common goal on equal terms. In reality, the goals, interests and perspectives of actors are likely to diverge and may be even in conflict with one another. This study was proposed to gain deeper understanding of the power relationships between these different groups in order to gain better insights of how to improve their operation to inform scaling out initiatives. The study was designed additionally guided by two research questions, i.e.

1. How does stakeholder engagement enhance the delivery of technologies and productivity in farming systems?
2. What are the needed interventions to improve multi-stakeholder innovation platforms as a mechanism for inclusive engagement to support functioning of delivery pathways?

**2. METHODOLOGY**

**2.1 Description of study area**



Fig 2 Map of Tanzania showing study sites

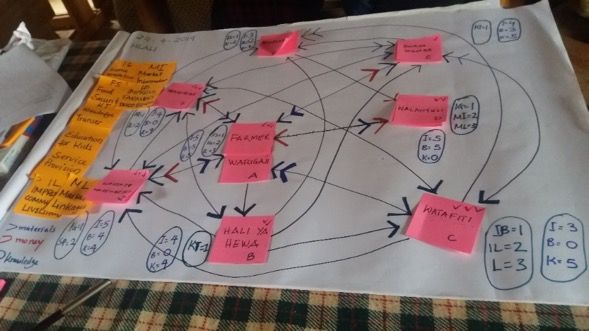
The study was conducted in the districts of Kongwa (Mlali, Moleti, Laikala and Chitego) and Kiteto (Njoro village) in Tanzania (Fig 2). Kongwa district is in Dodoma region which lies at 60 10’S, 35O 45’E and 1120 m above sea level with total annual precipitation averaging 556 mm per year. Kongwa District is a typical semi-arid agro-ecology with temperatures averaging about 28ºC and annual precipitation of 400-550 mm). Kiteto district is in Manyara Region, with weather conditions varying from semi-arid to sub-humid. The annual precipitation averages about 682 mm with temperatures of about 19.50C and altitude ranging from 800-2000 m above sea level. The rainfall, however in Kongwa and Kiteto between 2013 and 2016 recorded on farmers’ fields averaged 202.36 mm. Due to the high stress levels, a number of NGOs operate in the Region with various aims ranging from production, marketing and environmental management.

**2.2 Structure structure and data assembly**

The study involved Innovation Platform members from three clusters; 1) Research (participants from ICRISAT, TARI Hombolo and Makutupora), 2) at Village level, 2 meetings conducted in Mlali and Moleti and 3) at District level with IP members drawn from Kongwa and a control groups comprising of actors who were not part of the IP in bothe districts. Focus Group Discussion (FDG) were held involving key actors, to gain deeper understanding on their existing interrelationships, their interests and influence on one another, a type of comples social systems hinged on natural systems. In such cases, complex interrelationship between actors limite effectiveness of single actor designed approaches. Multilevel interrelations of actors, influence the development of networks and their interactions (Berkes, 2007). Bodin and Crona 2009, studying relations between nature and humans, observed that single objective/actor approache to conservation of nature or economic development are not successful in the long term especially if not implemented within the context of a social-economic system. Thus, the use of a social network approach to investigate the power relationships within this innovation plateform is useful as it provides for analysis of different sub-systems involving different actors layered differently. In this study we used social network theory to investigate social structures within the Kongwa and Kiteto IPs.

Data assembled through FGDs was analysed using Net-Map software as described (Hauck and Schiffer, 2012). Social interaction matrixes were developed from the FGDs following mapping of actors and their motives for engaging in the IP. The perceptions of motives, benefits and significance of actors was generated as described in Table 1. A mapping of the actors based on Table 1, was used to derive the relative interactions between actors in the social -economic system (Figure 1). The Net-Map software used for data management allows for:

1. Identification of actors directly involved in the community with respect to a specific field i.e. agriculture.
2. Assessment of both formal and informal relationships connecting the actors.
3. Assessment of actors’ potential influence on other network actors.



**Fig 1. Mapping of actors and their influences in Mlali**

**Table 1. Perceptions of motives, benefits and significance of actors involved in the IP**

|  |  |  |
| --- | --- | --- |
| Attribute | Description of attribute | Relevance for the assessment of actor influence |
| Perceived importance | Refers to the relative significance of a given actor(s) and their services from the view point of other stakeholders and the actor. | Used to evaluate an actor’s role and degree of engagement in the social-economic systems. A highly important actor is one who positively influences development of the society. |
| Perceived benefits  Expectation | Is the view point of other actors and or the actor themselves regarding their benefit to the social-economic systems. The benefit serving society or profiteering from it. | A first analytical stage of the relative importance of an actor. It was used to rate how the actor(s) perceived their relative service to society from viewpoint the wider community’s. It includes issues such as trust and fairness in service provision. An actor may be important, but seen as unfair, being a profiteer for example. |
| Perceived motivations | Refers to society’s perceived motivation for undertaking a given service provision. It also includes the actor’s given motivation. Examples include: Income, Food security, Knowledge sharing, wealth creation. | A second analytical stage of the relative importance of an actor. It was used to interpret actor(s) self interest in the social economic system. For example, it elucidates the extent to which an actor providing services is percived by other actors as engainging only for profit or society’s greater good. |

**Source: Modified from Hackenberg, 2015**

**3. RESULTS AND DISCUSSIONS**

**3.1 Cross cutting issues**

**3.1.1 Leadership and decision making**

Preliminary meetings were held with district officials (Nutrition, Livestock, Crops, Irrigation, Horticulture and Extension officers) to get a general understanding on how district operations are handled. It was noted that the district policy is guided by the national policy, however, such policies are often demand-driven based on prevailing circumstances in the communities. Guided by the national agenda, district operations always draw activities based on village reports directed to Districts’ Heads of departments provide such information every monday morning to prioritize agenda. Prioritized agenda are then passed on to Council meetings in which various stakeholders including NGOs are invited to attend to approve agenda for implementation. According to Kiteto District Officials the following were some of the most important stakeholders NGOs in the District; (i) World Food Program (WFP), (ii) AVRDV / The World Vegetable Centre (iii) Africa RISING (crops & livestock – poultry), (iv)Tanzania Natural Resource Forum on Livestock, (v) Kilimanjaro National Park (KINAPA) special for community mobilization & (vi) Manyara Agricultural Initiative (MAI) (Table 2). Districts also strongly advocate for “Public Private Partnership (PPP)” engagement, in order to successfully implement planned activities and or projects.

**Table 2. NGOs working in Kongwa District**

|  |  |  |
| --- | --- | --- |
| No | NGO | Role |
| 1 | Faida Mali | Sunflower production and marketing |
| 2 | DALBERG | Sunflower production and marketing |
| 3 | ADDA | Sunflower production and marketing |
| 4 | Lead Foundation | Environmental Management |
| 5 | LVIA | Soil and Water management |
| 6 | WFP | Sorghum evaluation and production |
| 7 | FAO | Youth and agriculture |
| 8 | World Vision | Bee Keeping |
| 9 | CG Centers | Crop genetics, Environment, nutrition |

**3.1.2 Gender, culture and land tenure impacts on access to services**

Focus Group Discussions (FGDs) were conducted in Mlali Village-Kongwa and Njoro Village Kiteto Districts to study the effect of gender, culture and land tenure on access to knowledge and technologies. A total of 78 respondents participated in the discussions; 53 in Kongwa (23 Innovation Platform (IP) Members and 30 being a control group) and 25 in Kiteto (7 Innovation Platform (IP) Members and 18 being a control group). IP members were project stakeholders who had been part of the Africa RISING project for at least 3 years and participated in platform meetings while the control group were those actors who had not been part of the project.

Results showed that culture was the overarching factor influencing both gender and land issues. The main focus in terms of services were knowledge and technologies. The study shows that culture had minimal effect on women’s access to both knowledge and technologies, the effect being more pronounced in the control group (Table 3). However, although the results in Kiteto had similar trends as Kongwa, the negative effect of culture is more pronounced in Kiteto with > 95% of women from IP and Control group believing culture negatively impacted their ability to access knowledge and technologies (Table 4). More boys attended school compared to the girl child and men made major decisions on what grow in their farms as well as how to use revenue from farming activities, with the exception of female headed households.

These results may imply more effort could be needed by the project if knowledge and technologies are to be scaled out in Kiteto than Kongwa. In general, the more exposed farmers are the less stringent are they to cultural norms and therefore the easier it is to break gender barriers for technology and knowledge dissemination.

**Table 3.** **Influence of gender culture and land tenture on access to services in Mlali Village-Kongwa**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Influencing factors (Gender, culture, land) | | | | | | | |
| Service | **% IP members** | | | | **% Control group** | | | |
|  | Men | | Women | | Men | | Women | |
|  | Yes | No | Yes | No | Yes | No | Yes | No |
| Knowledge | 60 | 40 | 58.5 | 41.5 | 55.53 | 44.47 | 75.5 | 24.5 |
| Technology | 30.65 | 64.5 | 50.5 | 49.5 | 50 | 50 | 70 | 30 |

**Table 4.** **Influence of gender culture and land tenture on access to services in Njoro Village-Kiteto**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Influencing factors (Gender, culture, land) | | | | | | | |
| Service | **% IP members** | | | | **% Control group** | | | |
|  | Men | | Women | | Men | | Women | |
|  | Yes | No | Yes | No | Yes | No | Yes | No |
| Knowledge | 65 | 35 | 100 | 0 | 45 | 55 | 100 | 0 |
| Technology | 57.45 | 42.55 | 100 | 0 | 30 | 70 | 95.4 | 4.6 |

**3.1.3 Relative importance of service providers in Kongwa and Kiteto**

The top 6 service providers in both Districts included; Extension Staff, NGOs, Local Government, Research Institutions, Agro-dealers and Aggregators. For importance, ranking was on a scale of 1-4, 1 being less important and 4 most important, similarly for availability; 1 being not available and 4, readily available.

There was significant differences, (p<0.05) in the way IP Members and the Control study group viewed district actors in terms of importance and availability (Appendix 1 ). In Mlali-Kongwa, both IP members and control group viewed extension staff, agro-dealers and aggregators are the most important service providers, while Local Government and Research Institutes are not viewed as very important (Fig 2). While Agro-dealers are very important, they are not readily available compared to Aggregators. Local Government is also viewed as readily available. NGOs, though important are also not readily available. These results show that local Government may be key in dissemination of technologies being readily available only if their role could be strengthened as are viewed not as important in terms of service delivery. These results show the imbalances existing between the demand (importance) and the supply (availability) sides of the services which may mean low efficiency levels in terms of delivery of the services. Good balance is only reflected by aggregators which means the village has opportunities for market outlets but limited by scarcity of agro-dealers to support production side of the value chains.

**Fig 3. Ranking of service providers in Mlali-Kongwa among IP members and the control group**

**Scales:** Importance: 1-4; 4 very important and 1 not important; Availability: 4 readily available and 1 not available

**3.2 Social networks, their interactions and influence on socio-econimic settings**

**3.2.1 Kongwa: District level analysis**

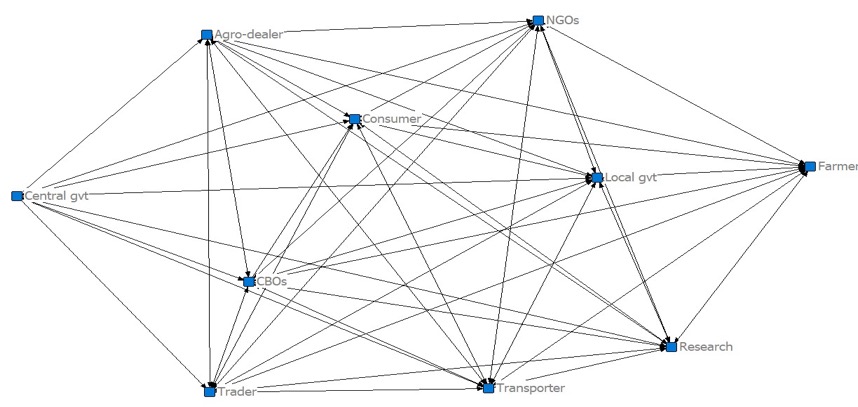
**3.2.1.1 Service providers and their interactions**

The meeting involved IP members from Kongwa Local Government with the District Agriculture and Irrigation Coordinator (DAICO) for Kongwa leading the team. District actors were mapped and their respective goals and motivations identified. The interactions in terms of knowledge, income and movement of goods/materials (produce and agri-inputs) mapped (Fig 4 and 5). The mapping exercise shows that most actors play a role in knowledge transfer but few are key in income and material flows (Fig 4). NGOs play a relatively bigger role in ametrail flow and therefore may be key in technology scaling out ventures.

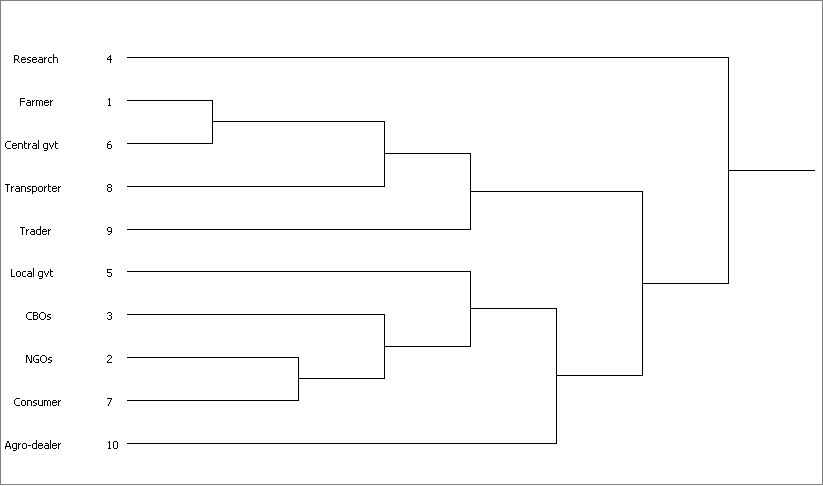
**Fig 4 Service providers and their active roles in delivery of knowledge, income generation and material services in Kongwa district**

**3.2.1.2 Providers of knowledge and its transmission**

The network diagnram below (Fig 5) provides a visual illustration of the relative importance and interconnectedness of knowledge service providers in Kongwa. Knowledge provision was identified as awareness campaigns, training and agricultural extension through result demonstrations. The network diagram shows that local government, consumers and Community based organizations are the main brokersor cut-points of the systems, such that their remove distabilises the systems. The linkage dendogram however shows Research as the main means and or source of knowledge to various players (Fig 6). The dendogram also clusters actors in Kongwa in two larger groups; a) Central Government, Farmers, Transporters and Traders and b) Local Government, Community Based Organizations (CBOs), Non-governmental Organizations (NGOs), Consumers and Agro-dealers.

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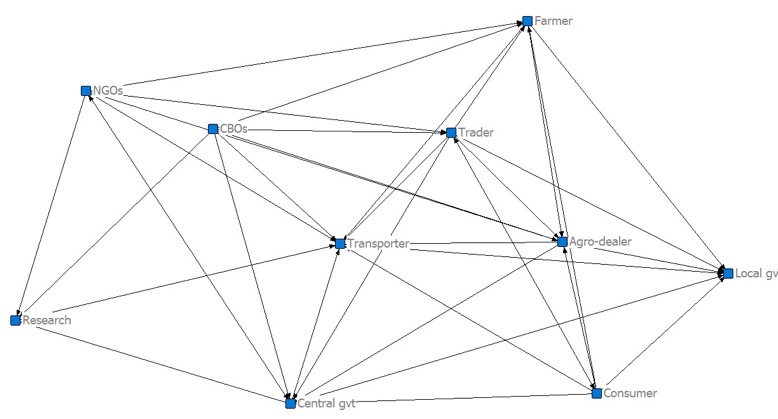
**Fig 5. Knowledge flow systems in Kongwa District**

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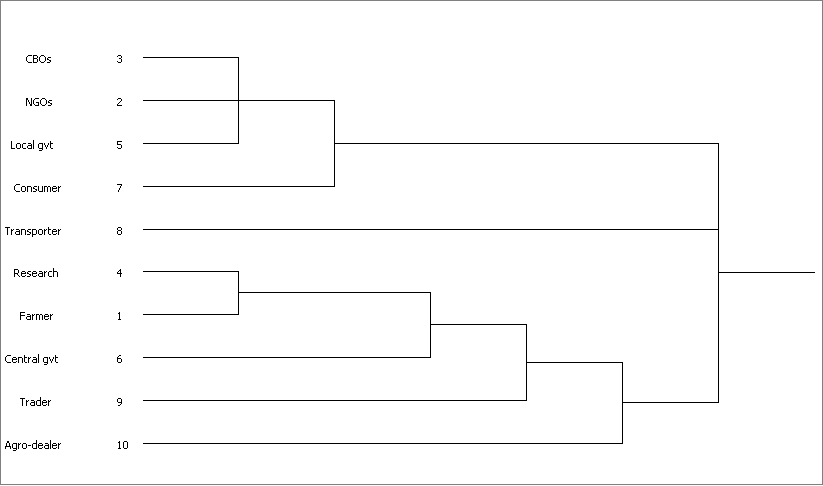
**Fig 6. Linkage Dendogram for knowledge flow in Kongwa district**

**3.2.1.3 Income generating services**

The study finds that there was relatively fewer actors involved in income generating promotional activities. However, NGOs, CBOs and traders (aggregators) played relatively largers role suggesting that they are the main brokers (Fig 7). Local government, Researcher are amongst the least involved in this area. Two groups of actors likely to be most involved in income generating activities were but linked to civil society were local government and Research and Farmers (Fig 8).



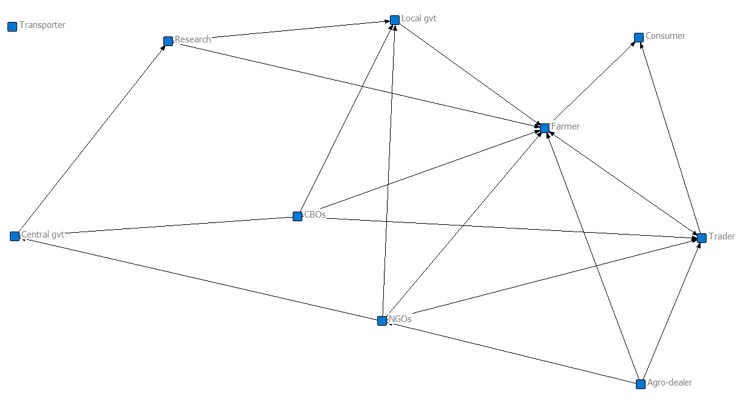
**Fig 7 Income flow in Kongwa District**

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**Fig 8 Income flow dendogram for Kongwa District**

**3.2.1.4 Materials (Agri-inputs and produce) flow/movement in Kongwa District**

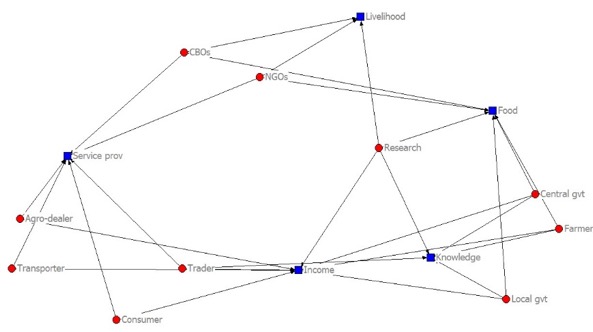
Materials in this case referred to movement of goods with benefits attached and included all agricultural inputs and other commodities. The network shows farmers and Community Based Organizations (CBOs) are key brokers. However, most of the materials movement target farmers, followed by traders and local government being delivered mostly by CBOs and NGOs . Transporters are had the least benefit from the materials they transported to other actors (Fig 9). It also shows that Community Based Organizations’ play a major role in supporting farmer and Local Government activities.

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**Fig 9. Materials flow in Kongwa District**

**3.2.1.4 Motivation of service provision**

In general, most players operating in the District aim to address the problem of food shortage and knowledge gaps. Knowledge was provided through varia media such as awareness campaigns, extension services about agriculture, Health, Environment promotional campaigns amongst others. The major player addressing food security at District level are Research Institutions (Fig 10). Research Institutions also played significant roles in knowledge sharing but only slightly influenced income and general livelihood improvement activities. Research Institutions, NGOs and traders as key cut-points in the communities.



|  |  |
| --- | --- |
| **Key** |  |
|  | Actors |
|  | Motivation |

**Fig 10 Main motivation of actors in Kongwa District**

**3.2.2 Kongwa: Village level analysis**

**3.2.2.1 Moleti village**

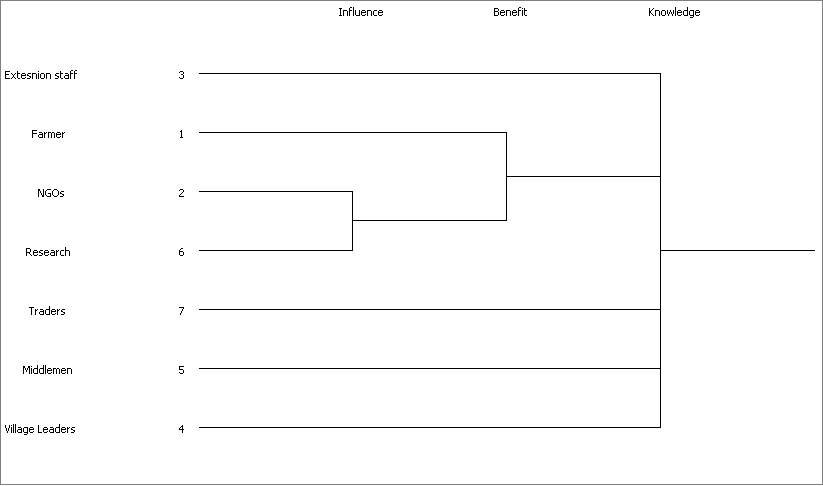
A total of 15 participants (6 women and 10 men) comprising of; village leaders, Extension staff, Middlemen, Traders and farmers were involved in the Focus Group Discussion.

**Socal interactions and their influence on service access: Tower of relationships**

The socal interactions and their influence on service access was investigated using the tower of relationship i.e. interaction involing influence, benefits and knowledge on the social economic settings of a community. Results show aggregators of produce (middlemen) are the mots influencial i.e. sitting on top of the tower of relationships, followed by village leadership. Researchers, farmers and extension rank in same strength while NGOs are the least. NGOs are however they are viewed as very influential (Table 5). With middlemen being the most influential actor, there could be high likelihood of the Village falling in a manipulative system resulting into farmers being exploited. Results also show that while farmers benefit in terms of knowledge, the amount of influence and benefit they have in the network is minimal. The general observation is that these relationships observed at District level are not necessarily the same at t village level. The dendogram shows 3 clusters i.e., a) NGOs, Middlemen and Traders, b) Farmers, Village leaders and Research Institutes and c) Extension Staff (Fig 11). While we try to get technologies and innovations across to beneficiaries, the network shows Extension Staff are isolated from the rest of the actors in Moleti and probably knowledge is the least of their motivation. While at District level, Extension Staff are viewed key, operations at Village level need to be better, currently they are not key in technology dissemination.

**Table 5. Inflence, benefit and knowledge control in Moleti**

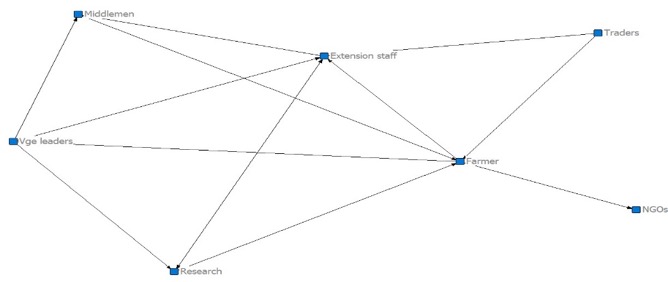
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actor | Influence | Benefit | Knowledge | Totals |
| Farmer | 5 | 2 | 2 | 9 |
| Extension Staff | 4 | 2 | 3 | 9 |
| NGOs | 5 | 0 | 3 | 8 |
| Village Leadership | 4 | 4 | 5 | 13 |
| Middlemen | 5 | 5 | 4 | 14 |
| Researchers | 4 | 2 | 3 | 9 |
| Traders | 2 | 3 | 3 | 8 |



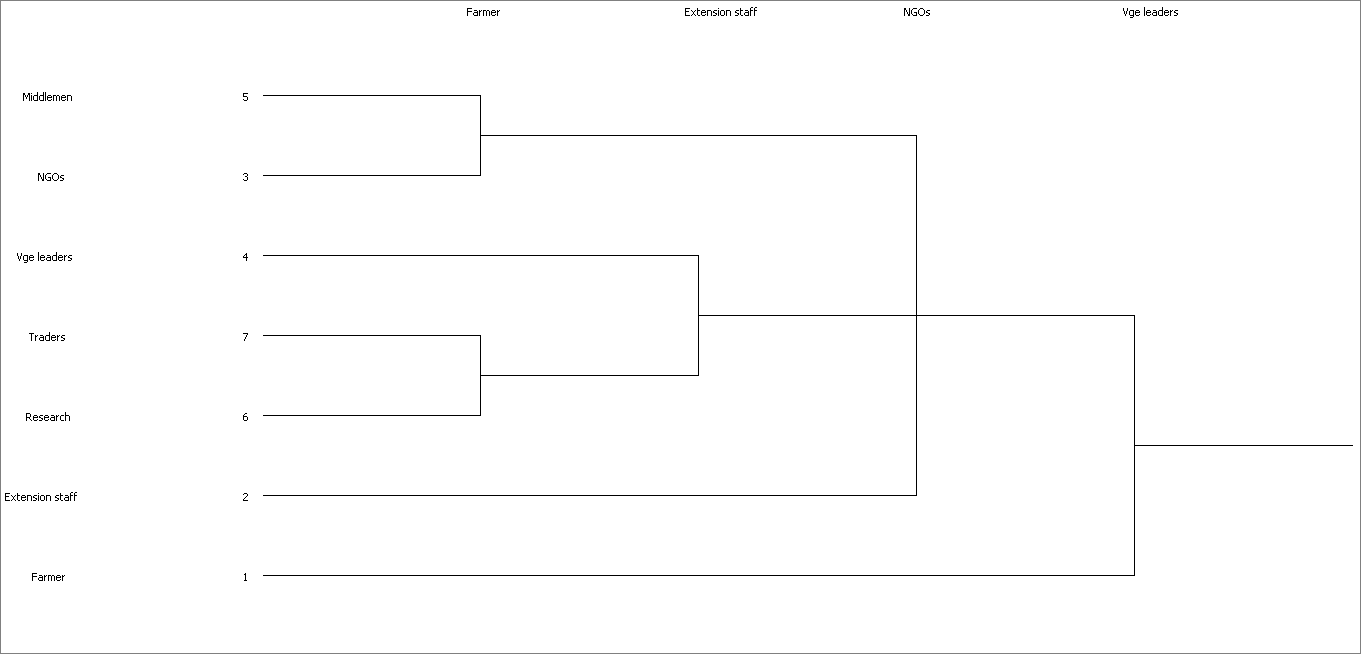
**Fig 11 Influence, benefit and knowledge relationships in Moleti village**

**Providers of knowledge and its transmission in Moleti**

Results show that knowledge transmission is mostly towards farmers and extension staff (Fig 12). Extension Staff to some extent provide information to Research and this may be feedback on specific project issues. From the dendogram, the village is characterized by few and poorly connected actors. While Extension Staff are a key broker in knowledge transmission, their link with NGOs is indirect, suggesting that engagement at farmer level may not be coordinated. They do however have direct relationship with Research, Village Leaders, Middlemen and Traders with the Dendogram showing village leaders being key in knowledge flow (Fig 13). Results also show that Researchers and NGOs do not work together especially with respect to knowledge sharing in the village.



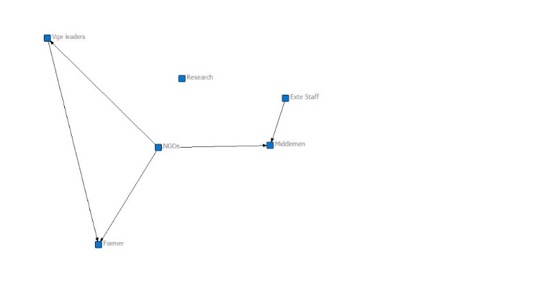
**Fig 12. Knowledge flow in Moleti village**



**Fig 13. Knowledge flow in Moleti**

**Income flow in Moleti**

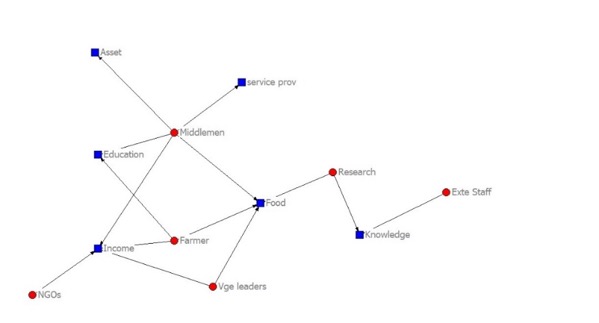
There was very minimal levels of income flow which might imply less money related activities, low levels of productivity and or a less dynamic community in terms of marketing 14). Researchers are perceived uninvolved in income flows. The main broker or cut-point are the NGOs, with complete linkages with farmers and Village Leaders. This may imply the three having some degree of working together.



**Fig 14 income flow in Moleti**

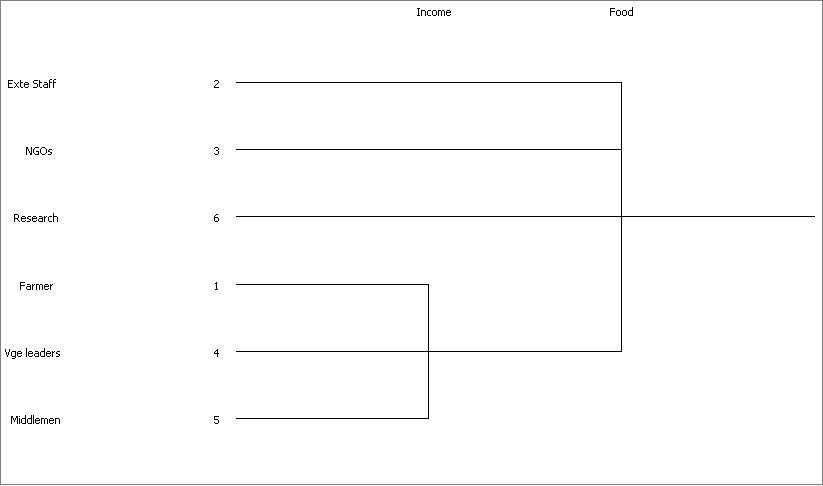
**Motivation or actors in Moleti**

In spite of the poor relationship network in the village, the available actors raised food security, knowledge sharing, asset accumulation, service provision, income and education for their wards as key motivations for their existence (Fig 15). Farmers are mostly interested in being food and income secure and also secure their children’s future in terms of education. Middlemen are perceived to be responsible for service provision but also build assets for themselves while research on food security and knowledge sharing. The motivation Dendogram shows farmers, village leaders and NGOs closely linked at income as major motivation but largely, food security is the main cut-point (Fig 16).



|  |  |
| --- | --- |
| **Key** |  |
|  | Actors |
|  | Motivation |

**Fig 15 Motivation network in Moleti**



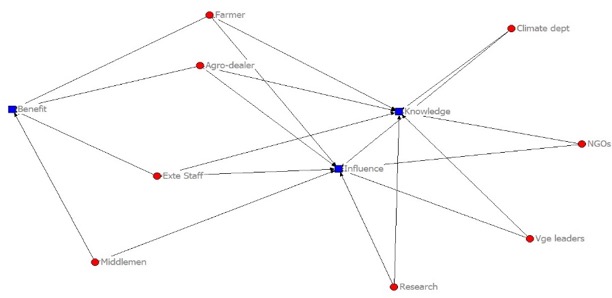
**Fig 16 motivation linkage Dendogram in Moleti**

**3.2.2.1 Mlali Village**

A total of 53 (35 women and 18 men) participants were present in the Focus Group Discussion that included, village leaders, Extension staff, Middlemen, Traders and farmers. The FGDs also mapped the village in terms of key underlying principles for the village operations like knowledge, income and material flows in addition to identifying the motives of different actors in the community.

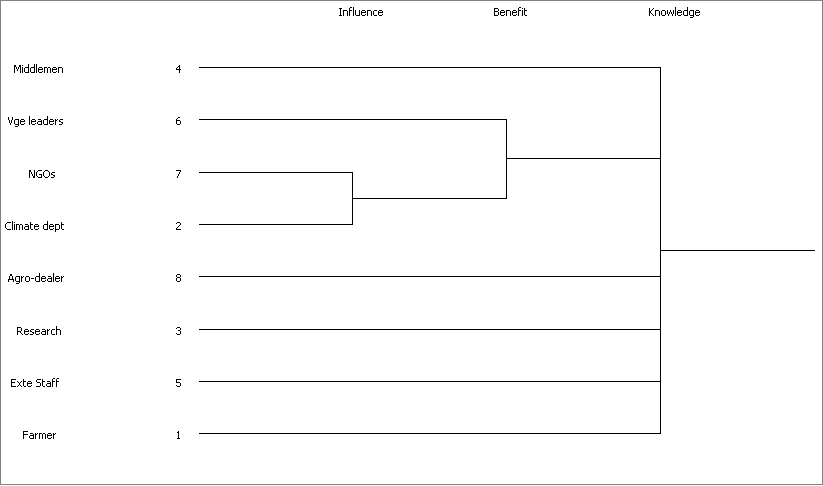
**Socal interactions and their influence on service access: Tower of relationships**

In Mlali, farmers are the most influential actors followed by agro-dealers and Extension staff (Fig 17). NGOs, Climate Department and Village Leaders are perceived not as important and the relations Dendogram clusters them together (Fig 18). Extension Staff in Mlali are viewed as very important. These results suggets that the level of agricultural activities in this village is very high and that demand for agriculture related services in similarly high. The strong presence or rating of agro-dealers shows that farmer investments in farming is considerable. Further probing showed that the major crops included; sunflower, maize, pigeonpea, sorghum, and groundnut in order of importance being close ot Kibaigwa Market a large produce dealership.

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|  |  |
| --- | --- |
| **Key** |  |
|  | Actors |
|  | Motivation |

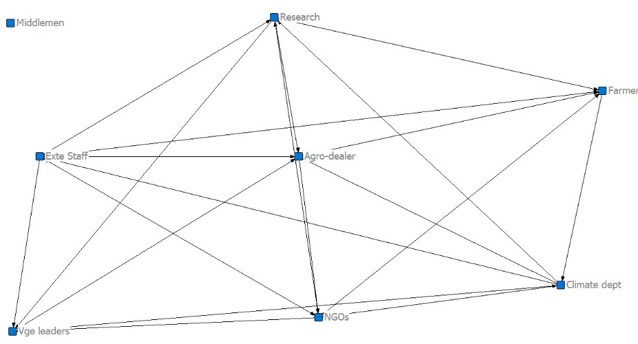
**Fig 17. Tower of relationship in Mlali**

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**Fig 18 Level of motive linkage in Mlali**

**Knowledge flow**

The knowledge flow system in Mlali is more complex than in Moleti with more group working closer (Fig 19). The plane linking agro-dealer, farmer and Extension staff seems to be the key cut-point. These results show how variable villages are from one another and that not all interventions or methodologies may apply effectively across villages. In Mlali, agro-dealers are the largest recipient of knowledge probably to provide services to the productive crop and livestock enterprises in the village.

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**Fig 19 knowledge flow in Mlali**

**3.3.1 Kiteto: District level analysis**

**3.3.1.1 Service providers and their interactions**

FGDs were also held in Kiteto District with participation from the District Officials and stakeholders for Njoro Village. The IP meeting involved a total of 25 participants (9 women and 16 men). Key actors identified in Kiteto included; NGOs, Local Government, agro-dealers, Central Government, aggregators (buyers) and Tanzania Metrological Agency (TMA).

**Relative importance of service providers in Kiteto**

Participants ranked actors based on who was perceived as: 1) most influential player, defined as a central actor to major operations in the District, 2) benefiting player, that through operations the actor gets most returns to investment and 3) knowledge source, that the actor is key is transfer or sharing of information or key messages in the District. Ranking was based on a 1-3 scoring scale; 1= high, 2= moderate and 3= low. In terms of influence, local government and Central government are viewed as the key actors while most actors seem to benefit from the system and only three actors (Research, local government and NGOs) are most critical as sources of knowledge (Table 6).

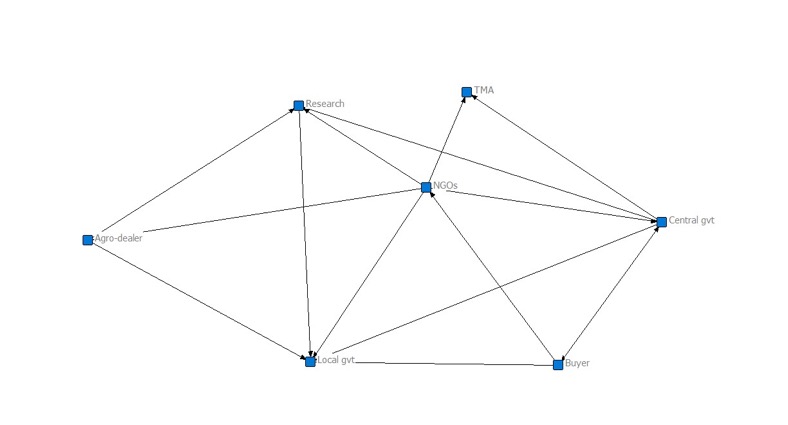
**Table 6. Ranking of actor motivation in Kiteto District**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actors | Influence | Benefit | Knowledge | Total |
| Central gvt | 1 | 1 | 2 | 4 |
| Agro-dealer | 2 | 2 | 2 | 6 |
| NGOs | 2 | 1 | 1 | 4 |
| TMA | 3 | 2 | 3 | 8 |
| Research | 3 | 1 | 1 | 5 |
| Aggregator | 2 | 2 | 3 | 7 |
| Local gvt | 1 | 1 | 1 | 3 |

**Interaction of actors in term of material flow in Kiteto**

Out of the seven (7) identified actors, only four (4) were perceived as key players in goods being transacted. NGOs transacted the most goods (42%), followed by Central Government (33%) (Fig 20). Research Institutes are the least involved. Overall most actors in the District benefited from NGOs for different goods provision. Agro-dealers play a very limited role of transfer of materials perhaps due to high transport costs minimizing their role in agricultural material transfer. Local Government is the largest recipient of materials but relatively weak in terms of supplying to the community (Fig 21). NGOs are shown to be the main brokers or cut-point actors in the District, they are a critical link in supply of goods.

**Fig 20. Material flow in Kiteto**

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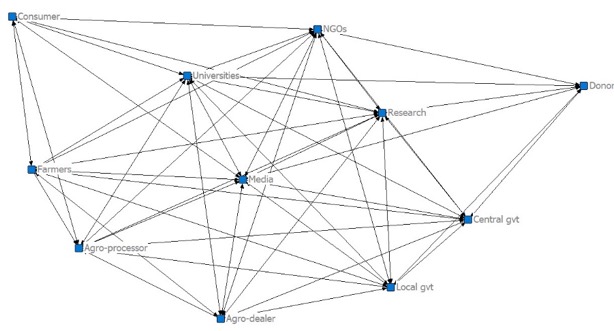
**Fig 21 Supply and demand of materials**

**3.4 Research teams perception of social factors that influencr access to knowledge and technology**

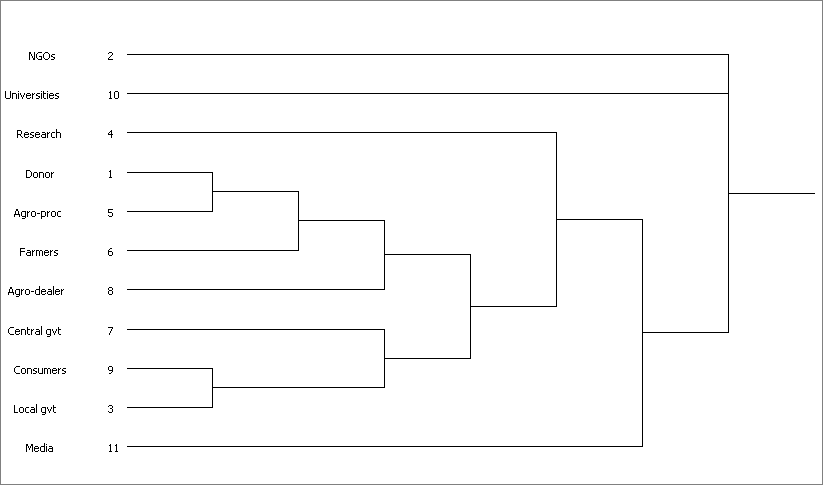
A team of researchers from ICRISAT, TARI Hombolo and TARI Makutupora were also engaged to map the entire project target area.The main purpose for this engagement was for researchers to outline actors they work with in the villages or District as a whole and possible interactions they have with such players. This information would then be cross-examined with what IP members at village and District level generate. Key partners of researchers included donors, farmers, NGOs, media, local government and universities.

**Knowledge Flow**

Results show that most of the knowledge as described by researchers, flows towards fellow researchers, Universities, media and NGOs while material flows are mainly towards NGOs or that the four (research, university, NGO and Media) form a key cut-point in the village (Fig 20). The Dendogram cluster analysis also confirms grouping of the four actors as closer actors with rest loosely linked (Fig 21). If the analysis represents the perceptions of the researchers, such would have to better shaped as all these are not permanent actors in the villages.



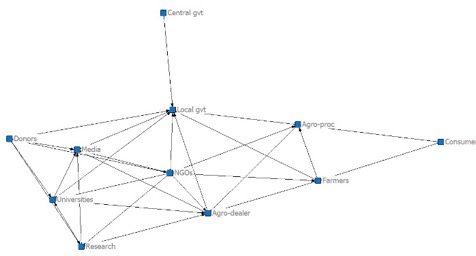
**Fig 20 Research knowledge flow as proposed by researchers**



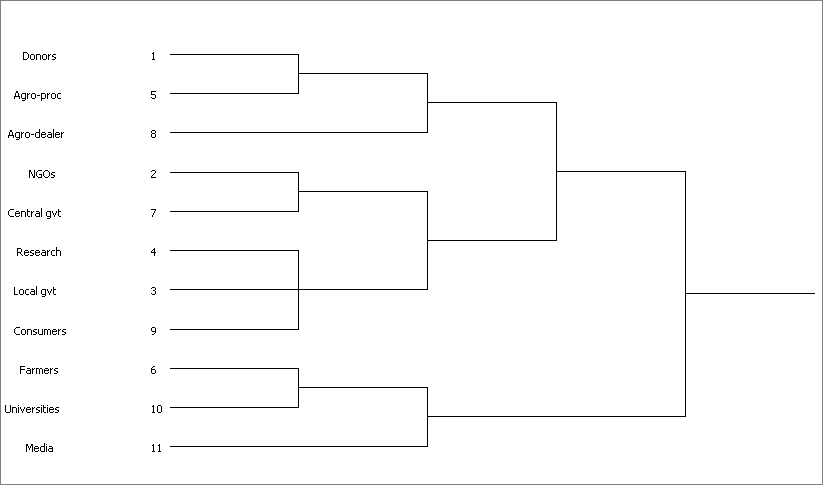
**Fig 21 Cluster analysis for knowledge flow as proposed by researchers**

**Income interrelationships as proposed by researchers**

Even though income relationships look open to all actors, researchers view NGOs and local government as critical in the two Districts of Kongwa and Kiteto with Central key government as a low profile player (Fig 22 and 23). Results however small groups working in isolation, for instance; NGOs and Central government; Research, Local government and Consumers; farmers and Universities. This may be an indication of lack of cohesion when it comes to implementation of activities in Districts.



**Fig 22 Income interrelationships as proposed by researchers**



**Fig 22. Cluster analysis for income interrelationships as proposed by researchers**

**Conclusions**

This study on power dynamics between different Innovation Platforms (IP) actors was conucted to elucidate processes that influence knowledge, materials and income flow among others in the Kongwa and Kiteto districts were Afriuca Rising has been operating IPs since 2014. The focus on understanding power dynamics was underpinned by the need to gain deeper understanding of the social interaction that influence access and adoption of knowledge and innovations. The seed value chains were used as the key technology around which access to knowledge and technology would be investigated. Results show that culture is key to addressing issues of gender and land ownership and needs to be considered as a key aspect in research and development, however it does not affect access to technologies by communities across the gender divide. The cluster analysis showed that civil society and researchers as key drivers of adoption. The main motivation for most actors is to fight food insecurity, knowledge sharing and increase income. These asiprations are apparent at district form organization point of view but less evident at community level where most initiatives are segmented. There is limited role of private sector in delivery of knowledge and or innovations. Taken together these results show a heavy role of public sector through NGOs, Community Based Organizations and the Local Government, in delivery of technology and knowledge especially of under invested crops. Engaging civil society is critical for dissemination of project messages and or ensuring adoption. It should however be noted that, public and civil society agencies are usually not-for-profit based, and therefore, have limited direct role in improving farm household incomes. This and the foregoing is critical to inform design of scaling-out initiatives especially in these remote and underinvested ecologies to focus on wider livelihood issues.

**References**

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**Appendices**

**Appendix1. Ranking importance and availability for District Actors**

|  |  |  |
| --- | --- | --- |
| **Group** | **Importance** | **Availability** |
| IP Members | 3 | 2.83 |
| Control | 3.5 | 2.83 |
| Mean | 3.25 | 2.83 |
| Fpr | 0.438 | 1 |
| sed | 0.619 | 0.624 |
| cv% | 33 | 38.1 |

1. The term ‘R4D platforms’ refers to ‘Research for Development platforms’ that are defined as partnerships constituted around specific entry points - often organized around specific value chains - that have a specific agenda to which all partners contribute and that are committed to co-learning. [↑](#footnote-ref-1)